Special Issue

Damage Mechanics of Metallic Parts in Bridge Engineering

Message from the Guest Editor

Many properly designed and constructed bridge structures are damaged during their operation. Cracks are particularly dangerous, mainly due to their sudden and uncontrolled development, and lead to failures in many situations. Concerning metallic bridges, damage to their individual parts and whole structures, as well as a significant reduction of the strength of the material from which historic buildings are made, may result in a reduction of the load-carrying capacity. In such situations, there is a reasonable suspicion that the current load capacity may not be sufficient for the safe use of these facilities. This Special Issue covers new developments in the field of damage mechanics of materials and structures in bridge engineering. Topics include theoretical and practical studies focused on the damage mechanics-based assessment of parts, members, and whole structures of metallic bridges. Original research papers, reviews, and short communications reporting the results of experimental, theoretical, and/or computational work on any aspect of research in the subject scope are welcome. We look forward to your contributions.

Guest Editor

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Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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